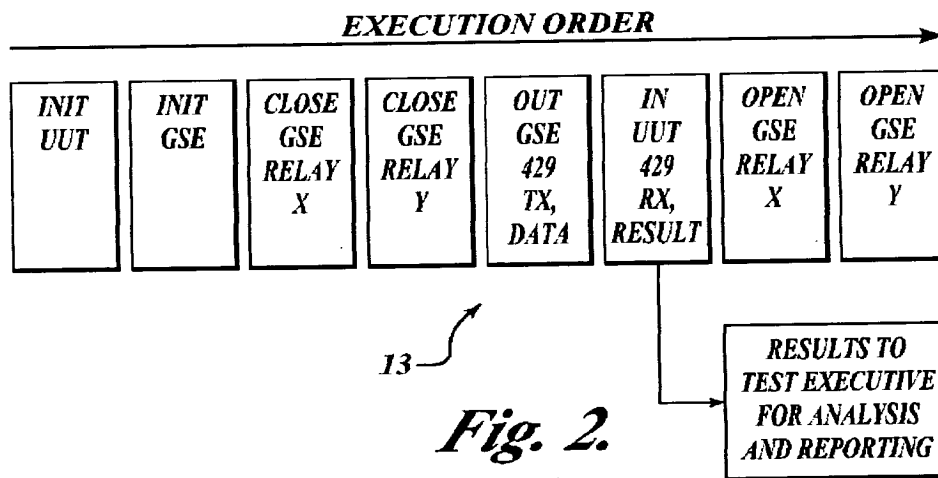
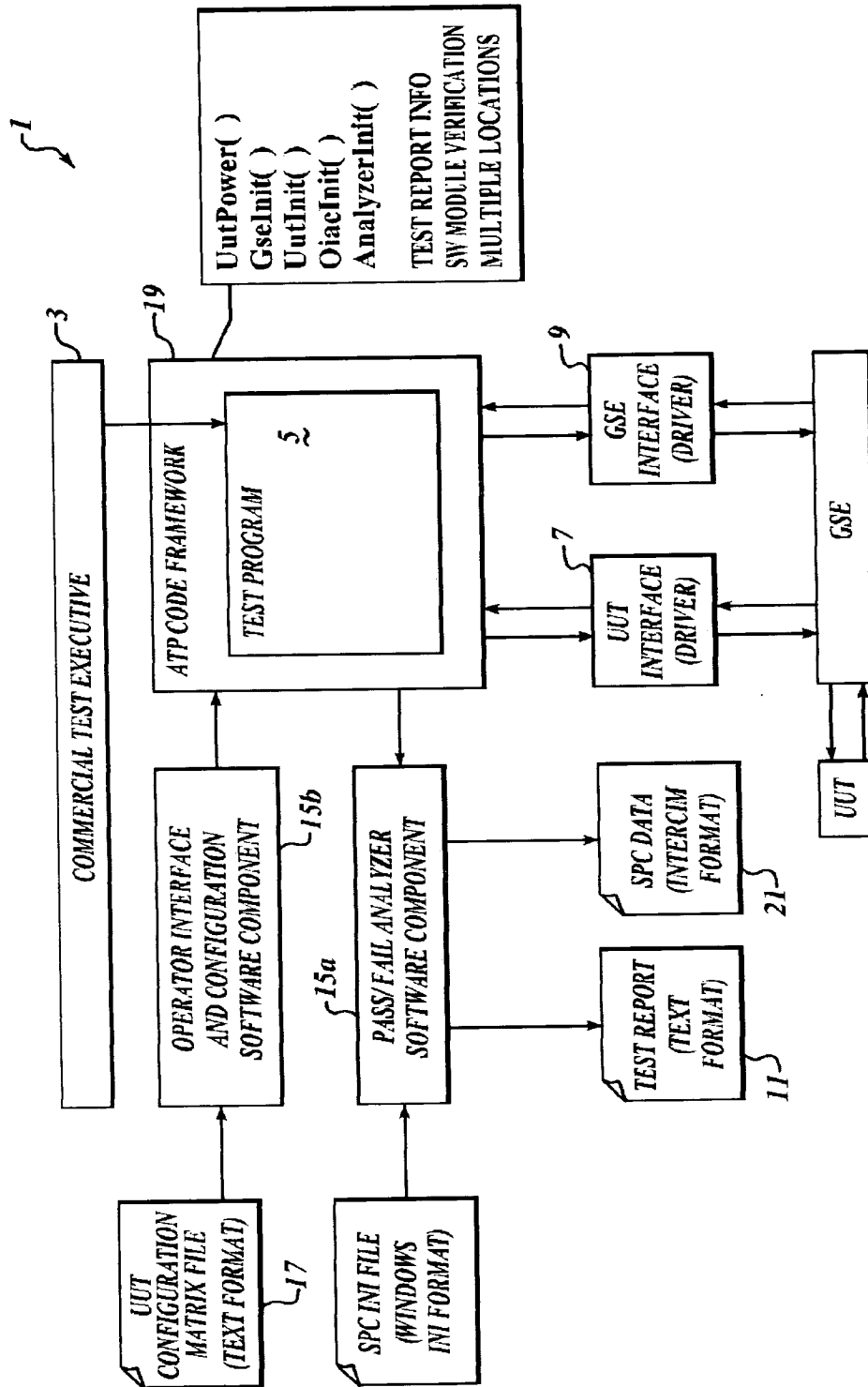


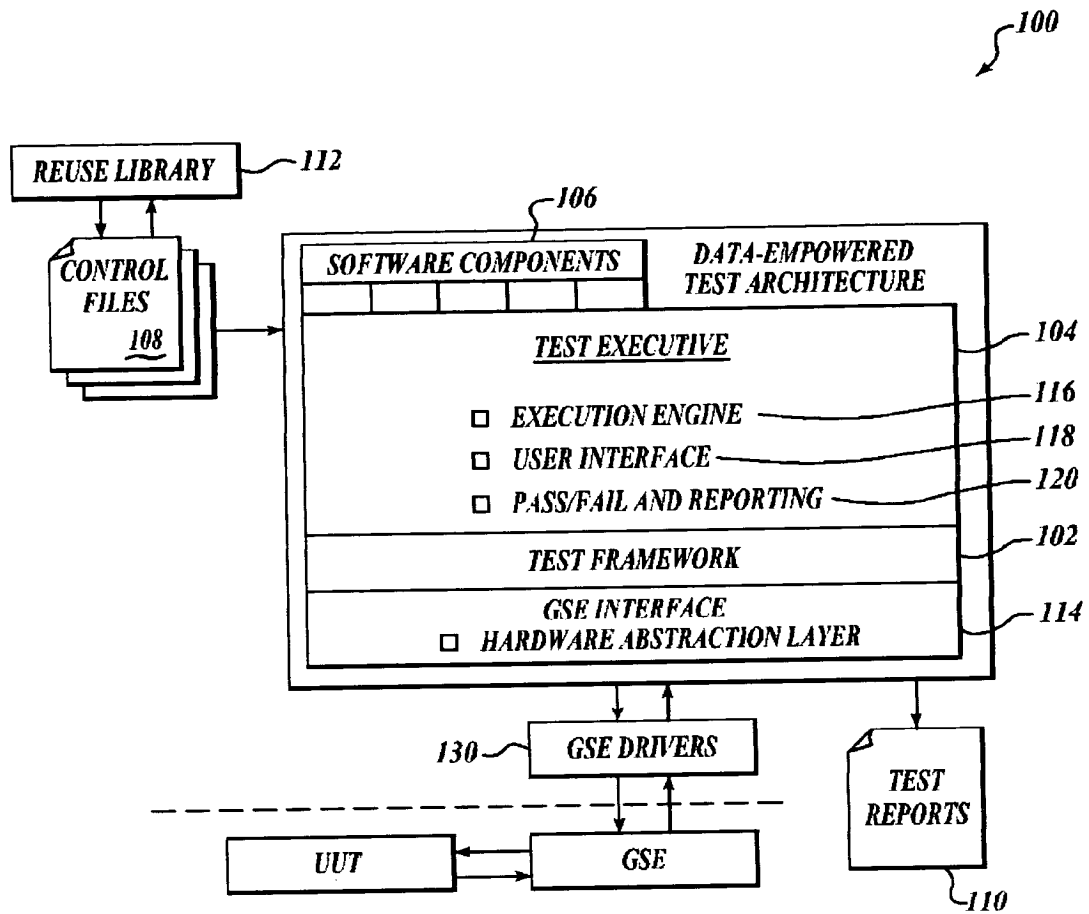
**Fig. 1.**  
(PRIOR ART)



**Fig. 2.**  
(PRIOR ART)



**Fig. 3.**  
(PRIOR ART)

*Fig. 4.*

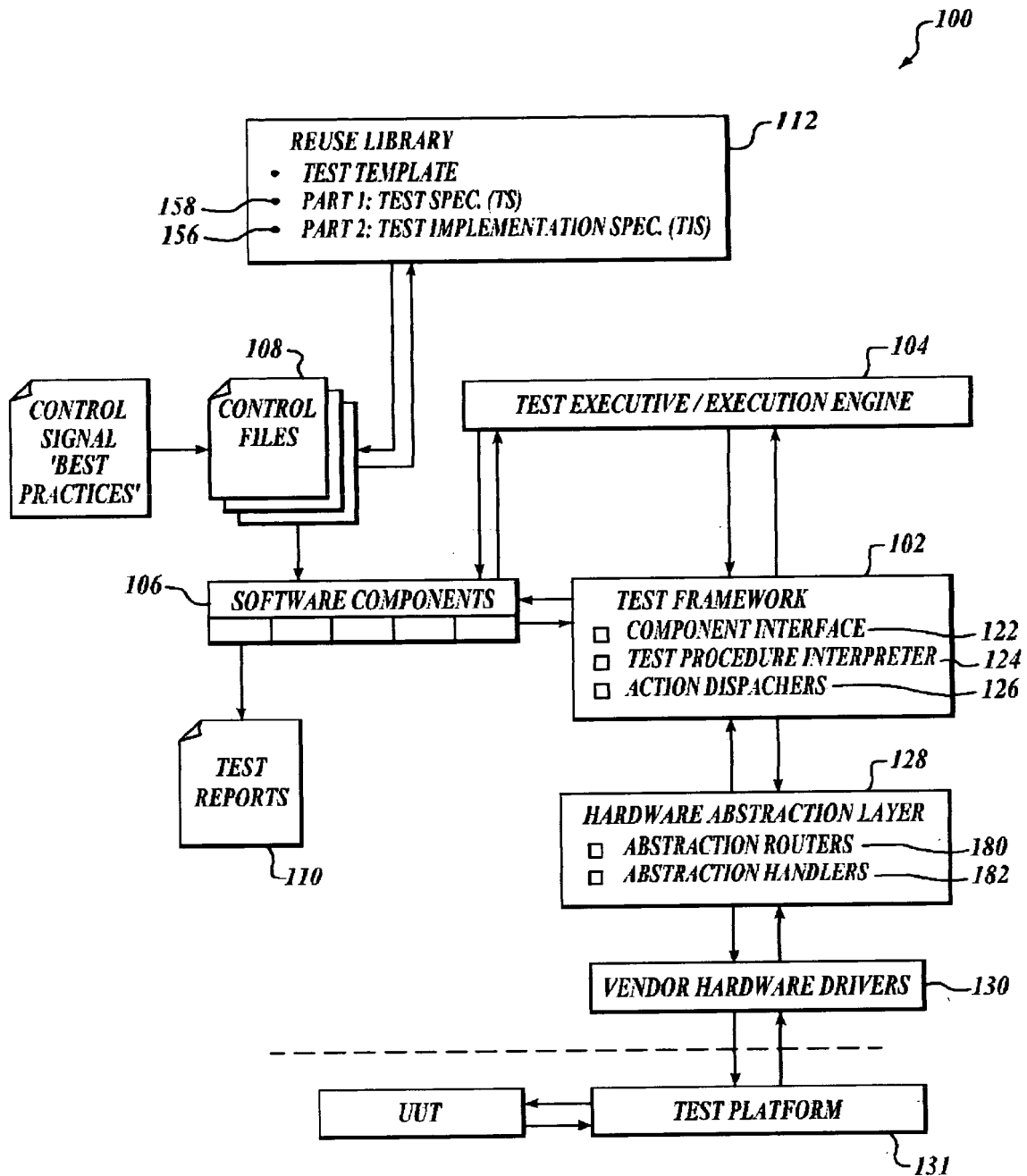


Fig. 5.

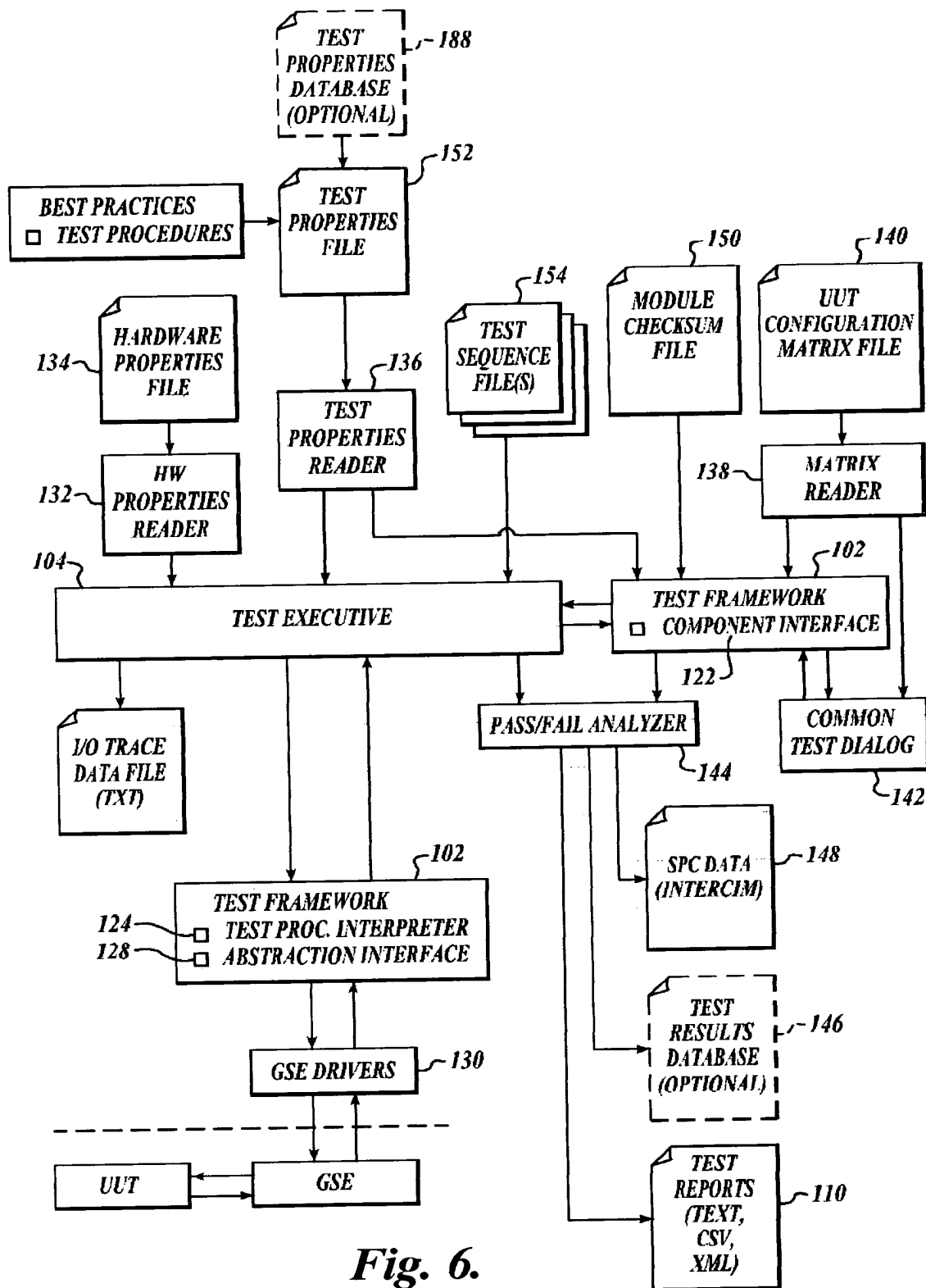


Fig. 6.

THE TABLE BELOW LISTS THE SIGNALS USED IN THIS SECTION.

UUT SIGNAL DATA	SIGNAL NAME	UUT PIN NUMBER	GSE RESOUC
	FDR MAINTENANCE FAULT	MAIN-24	DISCIN_MAINTENANCE
	FDR STATUS	MAIN-36	DISCIN_STATUS
	FDR DATA OUTPUT	MAIN-19, 18	ARINC717_RX1
	ATE PRESENT	MAIN-21	DISCOUT_AT_PRESENT
			164 TEXT DESCRIPTION

ANALYZE MODE IS THE NON-FLIGHT MODE OF THE UUT. DURING THIS MODE, THE UUT SHOULD SET THE FDR MAINTENANCE AND FDR STATUS DISCRETE OUTPUTS TO FAULT AND TURN THE BITE LED ON. THIS TEST CHECKS FOR THESE OUTPUTS DURING ANALYZE MODE.

SUBASSEMBLY: IO CARD (A2) SRU DATA 162

TEST ID : 18051 TEST ID 159

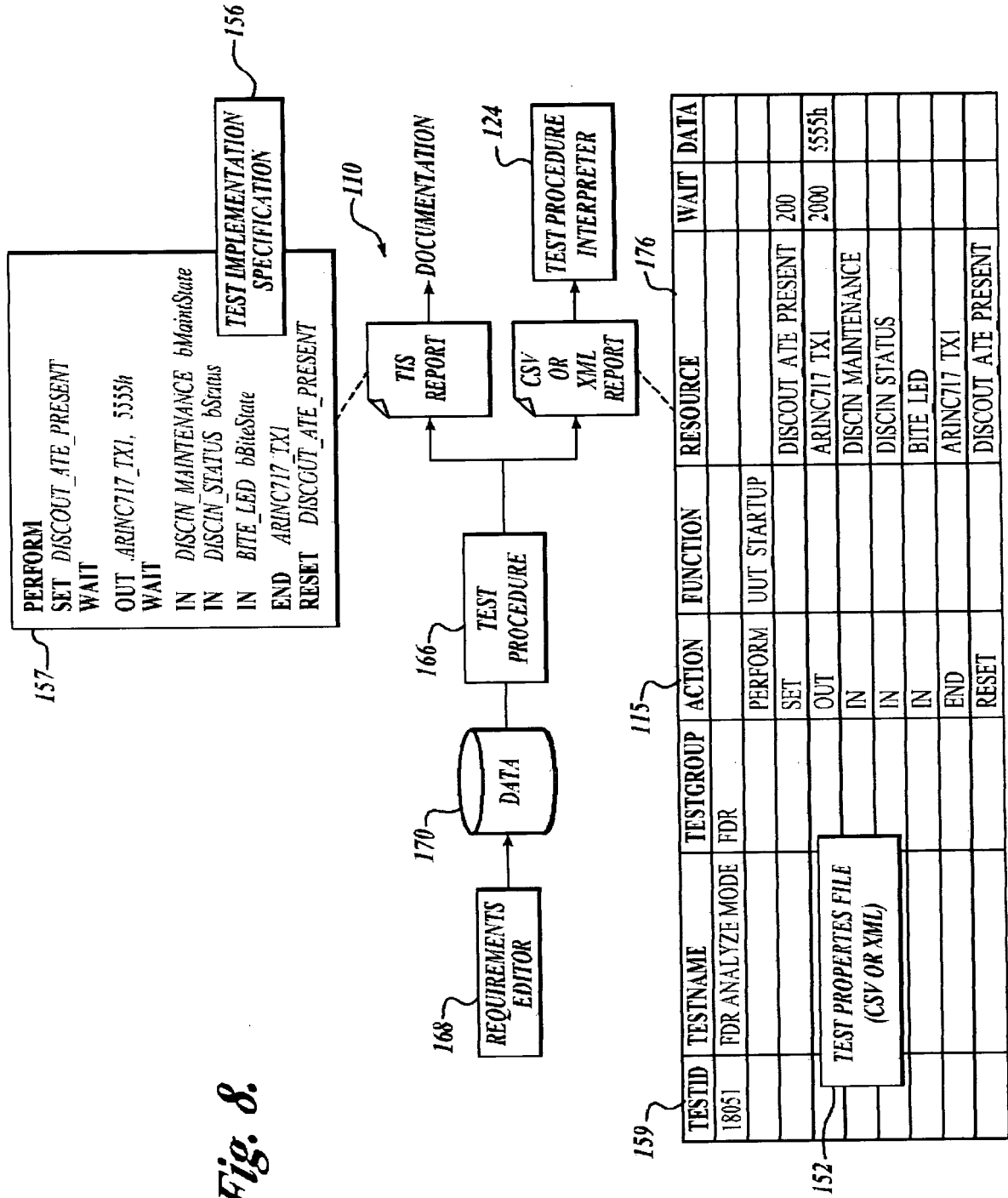
TEST GROUP: FDR

#### ANALYZE MODE TEST PROCEDURE

PERFORM UUT_STARTUP ( )	// APPLY POWER AND INITIALIZE THE UUT
SET DISCOUT_ATE_PRESENT	// SET THE UUT TO 'RECORD' MODE
WAIT 2000	// WAIT FOR UUT TO SWITCH MODES (200ms)
OUT ARINC717_TX1, 5555h	// TRANSMIT SOME DATA
WAIT	// ALLOW SOME TIME FOR DATA TRANSMISSION
IN DISCIN_MAINTENANCE bMaintState	// READ MAINTENANCE FAULT DISCRETE
IN DISCIN_STATUS bStatus	// READ STATUS DISCRETE
IN BITE_LED bBiteState	// READ BITE LED STATE (FROM OPERATOR)
VERIFY bMaintState = OPEN	// FAULT
VERIFY bStatus = GROUND	// FAULT
VERIFY bBiteState = ON	// FAULT
END ARINC717_TX1	// STOP 717 TRANSMIT
RESET DISCOUT_ATE_PRESENT	// SET THE UUT TO 'ANALYZE' MODE

166 TEST PROCEDURE

**Fig. 7.**



**ANALYZE MODE TEST PROCEDURE**

<b>PERFORM</b>	// APPLY POWER AND INITIALIZE THE UUT
SET DISCOUT_ATE_PRESENT	// SET THE UUT TO 'RECORD' MODE
WAIT	// WAIT FOR UUT TO SWITCH MODES (200mS)
OUT ARINC717_TX1, 5555h	// TRANSMIT SOME DATA
WAIT	// ALLOW SOME TIME FOR DATA TRANSMISSION
IN DISCIN_MAINTENANCE bMaintState	// READ MAINTENANCE FAULT DISCRETE
IN DISCIN_STATUS bStatus	// READ STATUS DISCRETE
IN BITE_LED bBiteState	// READ BITE LED STATE
VERIFY bMaintState = OPEN	// FAULT
VERIFY bStatus = GROUND	// FAULT
VERIFY bBiteState = ON	// FAULT
END ARINC717_TX1	// STOP 717 TRANSMIT
RESET DISCOUT_ATE_PRESENT	// SET THE UUT TO 'ANALYZE' MODE

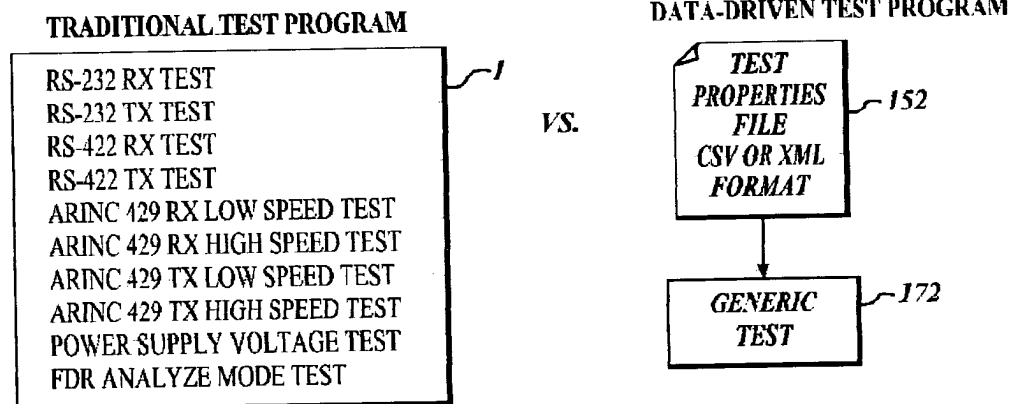
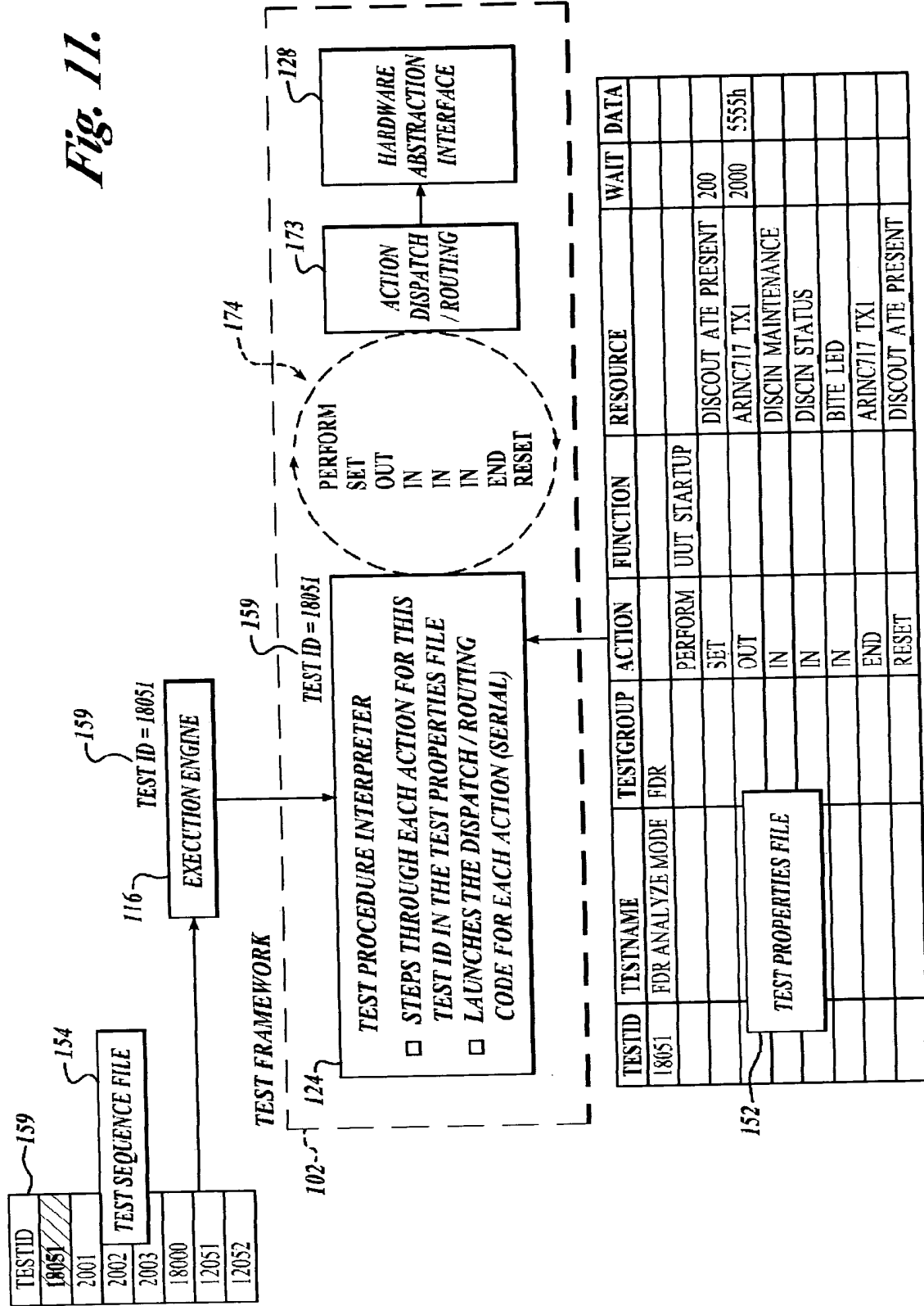
**Fig. 9.****Fig. 10.**



Fig. 11.



(A)

115

159

152

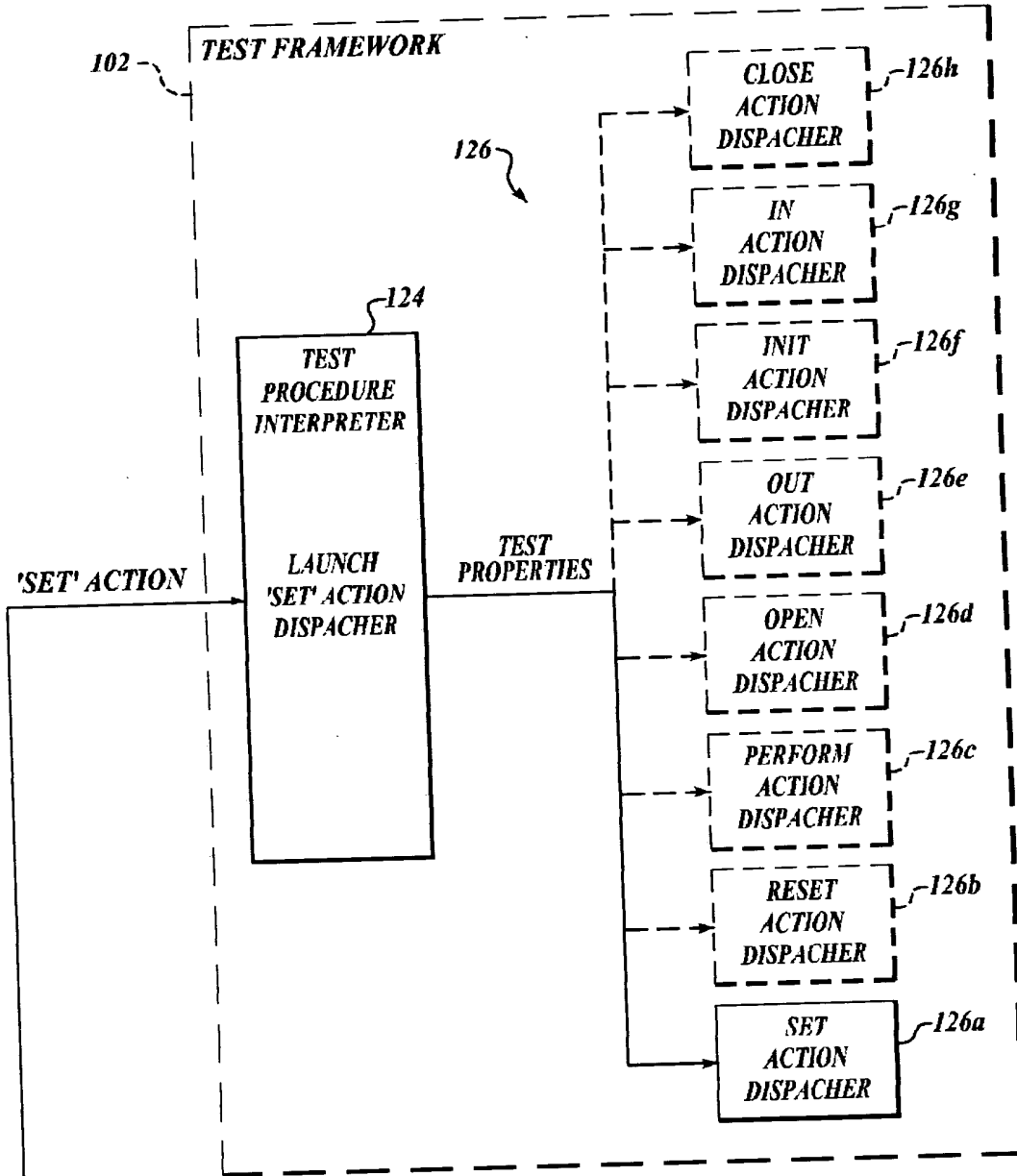
115a

TESTID	TESTNAME	TESTGROUP	ACTION	FUNCTION	RESOURCE	WAIT	DATA
13051	FDR ANALYZE MODE	FDR	PERFORM	UUT STARTUP			
			SET		DISCOUT ATE PRESENT	200	
			OUT		ARINC717 TX1	2000	5555h
			IN		DISCIN MAINTENANCE		
			IN		DISCIN STATUS		
			IN		BITE LED		
			END		ARINC717 TX1		
			RESET		DISCOUT ATE PRESENT		

Fig. 12A.

**TEST PROCEDURE STEPS:**

SET DISCOUNT\_ATE\_PRESENT  
WAIT 200



**Fig. 12B.**

Fig. 13A.

TESTID	TESTNAME	TESTGROUP	ACTION	FUNCTION	RESOURCE	WAIT	DATA
13051	FDR ANALYZE MODE	FDR	PERFORM	UUT STARTUP			
			SET		DISCOUT ATE PRESENT	200	
			OUT		ARINC717 TX1	2000	5555h
			IN		DISCIN MAINTENANCE		
			IN		DISCIN STATUS		
			IN		BITE LED		
			END		ARINC717 TX1		
			RESET		DISCOUT ATE PRESENT		

RESOURCE	GSE RESOURCE	CARDTYPE	SIGNALTYPE	CHANNEL
DISCOUT ATE PRESENT	DISCOUT 2	NI-3243	DISCRETE OUT	2
DISCIN MAINTENANCE	DISCIN 5	NI	NIDAO	5
DISCIN STATUS	DISCIN 9	NI	NIDAO	9
ARIN	429 TX1	CEI-16R8T	ARINC 429	1
ARIN	429 TX2	CEI-16R8T	ARINC 429	2
ARIN	429 RX1	CEI-16R8T	ARINC 429	1
ARINC429 RX2	ARINC429 RX2	CEI-16R8T	ARINC 429	2

102

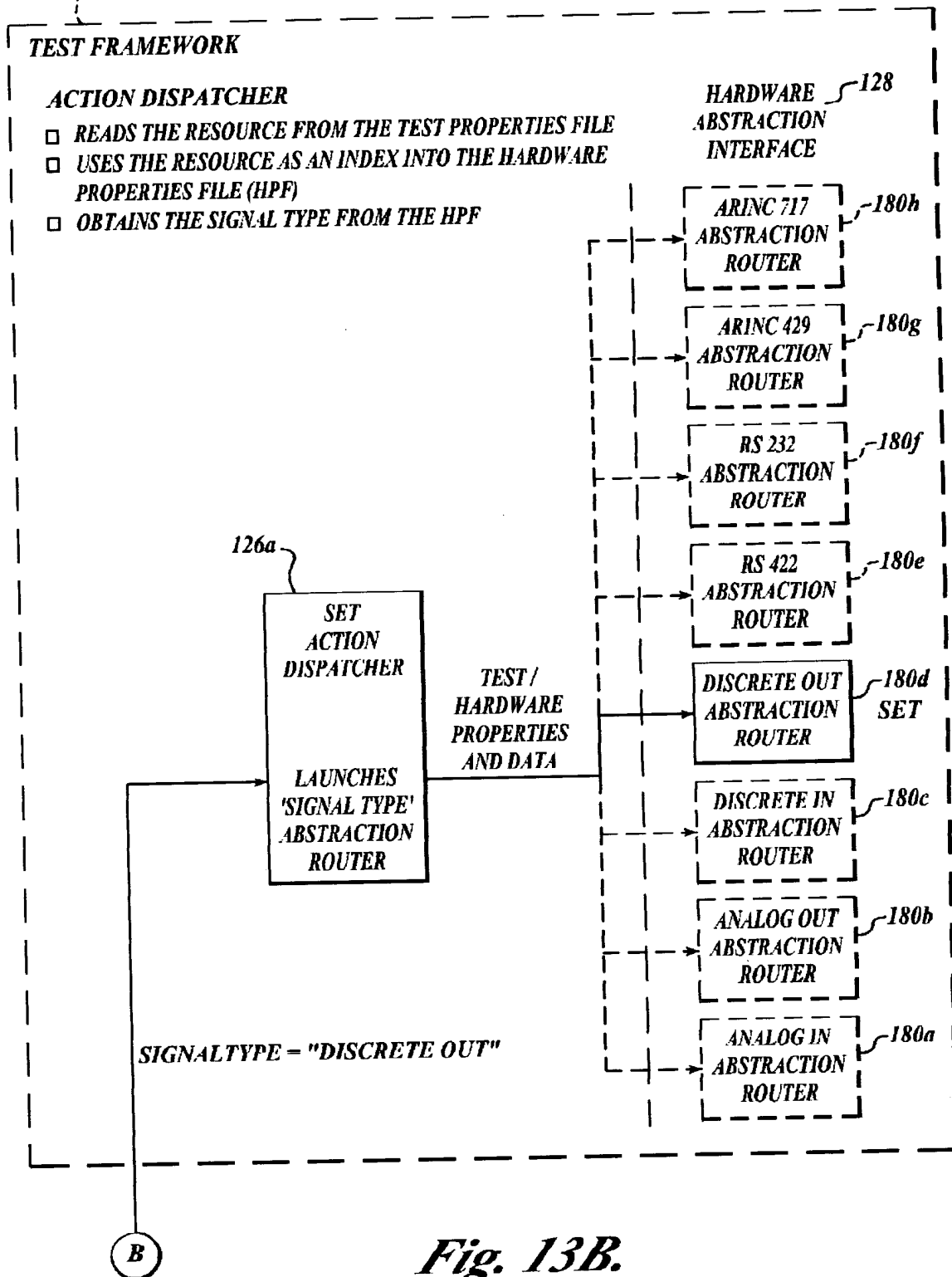


Fig. 13B.

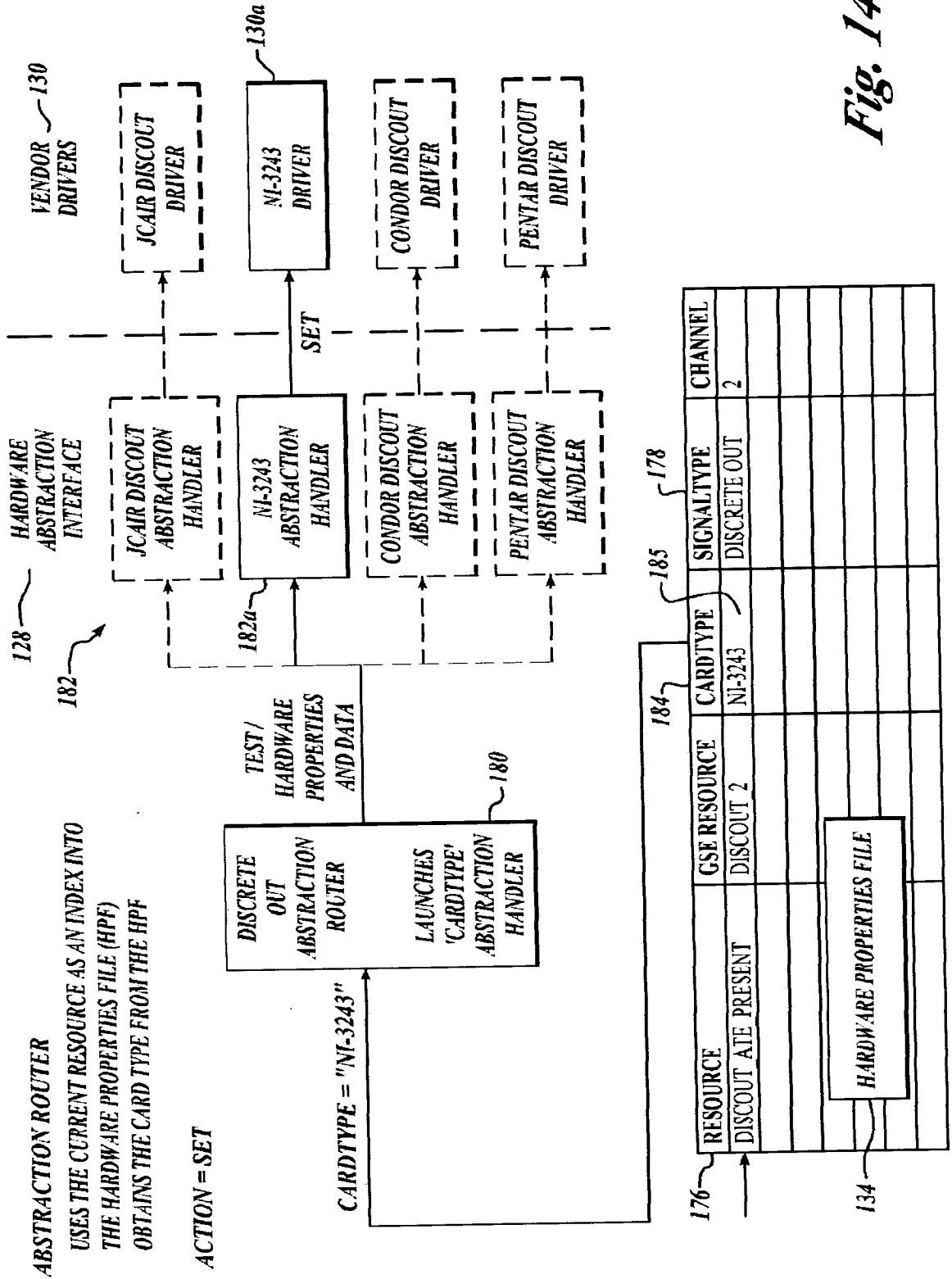
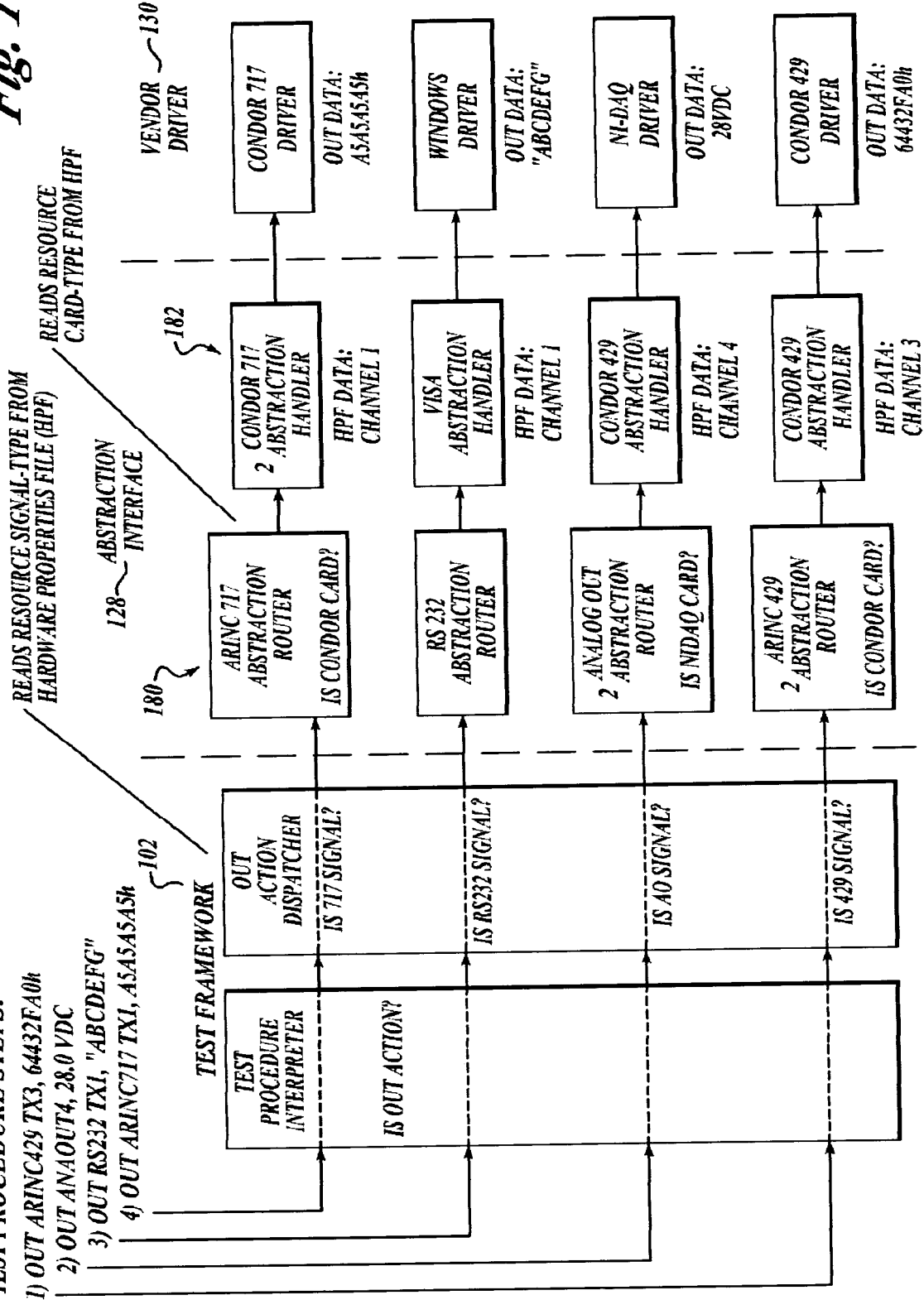


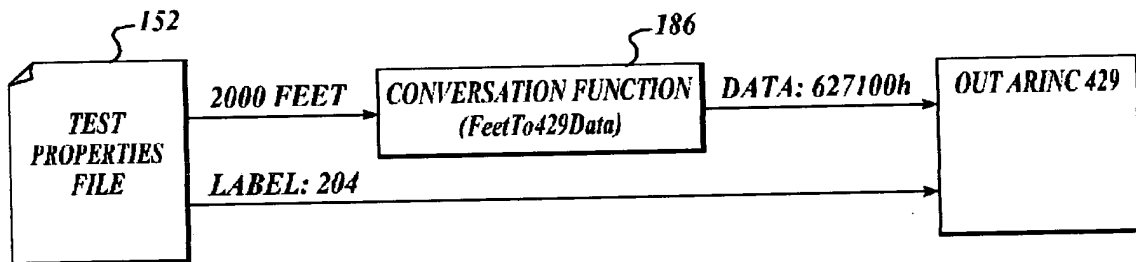
Fig. 14.

**Fig. 15.**

**TEST PROCEDURE STEPS:**

- 1) OUT ARINC429 TX3, 64432FA0h
- 2) OUT ANAOUT4, 28.0 VDC
- 3) OUT RS232 TX1, "ABCDEF"
- 4) OUT ARINC717 TX1, A5A5A5A5h



*Fig. 16.*